# Money Disbursements of Wage <br> Earners and Clerical Workers in the North Atlantic Region- <br> 1934-36 

By
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## PREFACE

The Bureau of Labor Statistics has been making studies of the money receipts and disbursements of wage earners and salaried workers since 1888. The first survey was initiated to provide information on wages and levels of living among American and European workers. Later studies, made in 1903 and 1918, were undertaken to secure weights for indexes of the cost of food and other goods purchased by families of wage earners and salaried workers.

The 1918 survey in which data were obtained from 12,096 families at 7 different income levels has supplied the weights for the cost of living indexes published currently by the Bureau of Labor Statistics. Since 1918, however, consumer purchasing habits and the articles available in the retail market have greatily changed. Some goods which were not widely available in 1917-18 are now purchased regularly by families of low and moderate income. Some have decreased in relative importance, and some have disappeared from the market. Studies made by various agencies since 1918 have indicated the importance of these shifts but have been neither sufficiently extensive nor coordinated to provide the material needed either for revising the Bureau's cost of living indexes or for giving a comprehensive picture of the living of the wage-earner and clerical groups.

This study is part of an investigation of the money disbursements of wage earners and clerical workers in the larger cities of the United States which was undertaken by the Bureau of Labor Statistics in the fall of 1934, primarily for the purpose of bringing up to date the items to be priced and the quantity weights to be used in computing its indexes of changes in living costs.

The data in this bulletin are based on the actual living of 997 families which cooperated in the study in New York City. In addition to throwing light upon the incomes of the families covered, the data portray their expenditures for food, clothing, house furnishings, medical care, and the other items that enter into family living. They also throw light on the amount and kind of goods and services that are purchased by the wage-earner and clerical groups in New York City.

This survey was made in cooperation with the Russell Sage Foundation, the New York State Temporary Relief Administration, and the Works Progress Administration. Mr. Ralph Hurlin and Miss Margaret Hogg, of the Russell Sage Foundation, assisted in choosing the sample.

Isador Lubin, Commissioner of Labor Statistics.

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## Part IV.-Appendixes

## Appendix A

## Notes on Tabular Summary

## General.

Economic family.-An "economic family" as defined for this study consists of two or more persons living together and sharing their economic resources. In most cases, the members of an economic family are related by ties of blood, marriage, or adoption, but in some cases, an unrelated member was found to share income and family living. Persons related by blood, marriage, or adoption were not treated as members of the economic family if they lived as boarders and kept their funds separate from family funds, unless they gave a complete record of their incomes and expenditures. Persons who were members of the economic family for an entire year were not necessarily members of the household for the year. A member supported by the family in school, college, or hospital for all or part of the year, or a member working away from home for part of the year, sharing his income with the family for that period and able to report all his expenses for that period would be treated as a member of the economic family but not of the household for the entire year. In computing the number of persons who were part of the economic family for a year, the number of weeks each member had shared his income with the family was listed, the numbers summed, and the total divided by 52 . This procedure yielded the number of equivalent persons who had made up the family for 1 year.

Household.-The household has been defined to include the members of the economic family living together in one dwelling, plus roomers and guests sleeping in the family dwelling, plus boarders and guests eating with the family. The number of persons in the household was computed by adding the number of weeks each member of the family had been part of the family's housekeeping establishment, the number of weeks each boarder, lodger, and guest had been with them, and dividing the total by 52 in order to secure the number of equivalent persons making up the household for 1 year.

Net family income or net money income.-Net family income has been defined to mean the sum of earnings (including net receipts from boarders and lodgers), net rent, interest, dividends, gifts, pensions, insurance annuities received during the schedule year, minus business losses and expenses. The money value of income received in kind, whether from use of owned home, or from other sources, has not been included in computing income in this investigation. No funds received as a result of the depletion of assets have been treated as income. Similarly, inheritances have not been regarded as income.

Current expenditures.-Throughout the report the term "current expenditures" is used to mean expenditures for ultimate consumer goods, including relatively durable consumption goods. Interest on money borrowed for family use has been included in such expenditures, but savings and investments have not. The time and funds available for the investigation have not made possible the presentation of separate totals distinguishing expenditures for the more slowly consumed, as distinguished from quickly consumed goods. Indeed, the data on depreciation rates for reletively durable consumer goods are so fragmentary that it would be extremely difficult to do so: Expenditures for such durable goods as automobiles, mechanical refrigerators, and other furnishings and equipment have been classified with expenditures for food and carfare and other quickly consumed goods as "current expenditures," while money spent for permanent improvements on owned homes and other real estate or as payment on the principal of mortgages has been classified as savings. The total cost of consumer goods purchased on credit was included in current expenditures and the amount of the obligations outstanding at the end of the year was taken into account when computing changes in liabilities over the 12 -month period. Money paid out for life-insurance premiums has been classified as savings.

The total obligations incurred in the year covered by the schedule for consumers' goods purchased on credit was included in current expenditures and the amount of the obligation outstanding at the end of the year was taken into account when computing changes in liabilities over the 12 -month period. For example, the total amount incurred for an item purchased on the installment plan (original price plus carrying charges) is entered as the amount of the expenditure, though the amount paid in the schedule year may be considerably less than the total contracted for; and the total amount of rent, taxes, etc., falling due in a year are entered as though paid, though they have been paid in part or not at all. The unpaid balances owing at the end of the schedule year on debts contracted during the schedule year are entered as increases in debts on table 4. Amounts paid during the schedule year on goods purchased on the installment plan before the beginning of that year are treated as savings. (See "Surplus," p. 177, "Payment of debts to: Firms selling on installment plan," p. 181, and "Increase in debts: Payable to firms selling on installment plan," p. 182.)

Expenditures as entered on tables are purchase price less trade-in allowance, in cases where such trade-in allowances were made, for example, automobile and furniture purchases.

Surplus or deficit.-Surplus or deficit represents the difference between current income and current expenditures. Since the figures on both these amounts as secured by the schedule method are subject to
an undetermined error of estimate (see "Balancing difference," p. 178), the surplus and deficit data were obtained by asking in detail changes in individual asset and liability items over the schedule year. Net surplus or net deficit was computed as the net difference between the funds received during the schedule year not used for current expenditures and the funds made available for family use from sources other than money income (table 4 ; see also p. 18 of schedule facsimile, p. 225). It should be noticed that the emphasis is placed on net rather than gross figures for changes in assots and liabilities. That is, for an individual family, only net entries were made for an individual transaction such as a trade of property involving a net payment of $\$ 500$. Thus, the net change item is more significant than the absolute amount either of increase or decrease in assets or increase or decrease in liabilities.

Surplus.-Surplus, savings, and investment are terms used to mean net decrease in liabilities and/or increase in assets. This figure appears as the net change in assets and liabilities (when the total increase in assets and/or decrease in liabilities is greater than the total decreass in assets and/or increase in liabilities.) Money paid on the principal of real estate mortgages or spent for permanent improvements to real estate (such as the addition of a room to a houss) has been treated as an increase in assets and hence as investment, as has also money spent for the purchase of stocks and bonds, building and loan shares, and other forms of permanent assets. Money used, for example, for the payment of installment obligations for an automobile purchased prior to the schedule year, is treated as decrease in liabilities and hence as a part of savings. Thus, money used for decreasing the liabilities of a preceding year, as well as that used to increase assets, has been treated as savings.

Deficit.-Deficit or negative savings is the term used to mean net increase in liabilities and/or net decrease in assets. This figure appears as the net change in assets and liabilities (when the total decrease in assets and/or increase in liabilities is greater than total increase in assets and/or decrease in liabilities) and is shown in tables 2,5,19, and 22 of the Tabular Summary. Money received through the sale of property, from the settlement or surrender of life insurance or endowment policies, and repayments by others of the loans made to them have been treated as money resulting from decreases in assets or changes in their form and thus may form part of deficits or negative savings, but not of money income. Money borrowed either directly or as book credit is a form of increase in liabilities and hence may comprise a part of deficits or negative saving but is definitely not a part of money income.

Inheritance.-Money recaived by inheritance, essentially a windfall, cannot be treated as income because it is nonrecurring, nor as investment, because it may be spent during the year, nor can it be regarded as a decrease in assets in the same sense as withdrawal of asvings or sale of property. Inheritance has therefore been treated as an independent item, forming a part of total receipts and coordinate with but not a part of current income and net change in assets and liabilities. It is shown in tables 2, 4, 5, 19, and 22. It includes enly cash inheritances received during the schedule year. Inheritances of property not sold during the schedule year are not recorded.

Total money receipts.-The term "total money receipts" has been used to describe total money income plus deficits or net negative savings wherever they occur, plus money received through inheritance. Thisritem is not shown as such in the Tabular Summary but it may be computed by adding for any desired group of families the following items: annual money income, net changes in assets and liabilities where the sign of the net change is minus ( - ), and inheritance.

Total money disbursements.-The term "totsl money disbursements" has been used to describe total current expenditures plus surpluses or net savings or investment wherever they occur. This item is not shown as such in the Tabular Summary but it may be computed by adding for any desired group of families the following items: annual current expenditure and net change in assets and liabilities where the sign of the net change is plus ( + ).

Balancing difference.-The difference between total disbursements and total receipts on any schedule was the balancing difference, and represented discrepancies due to inability of families to recall to the last penny every financial transaction of the year. No schedule was accepted in which this difference was greater than 5 percent of the larger figure.

Schedule year.-All data shown in the tables are for a 12 -month period unless otherwise specified. The data secured from each family apply to the schedule year prior to the visit of the field investigator, ending with any one of four specified quarters: the winter quarter ending February 28, the spring quarter ending May 31, the summer quarter ending August 31, and the fall quarter ending November 30. For the purposes of the revision of the cost of living index, it was desired to secure material on seasonal variations in expenditures, and on this account data on purchases in different quarters were obtained for food, clothing, fuel and light, furniture and furnishings, automobiles and motorcycles, movies and certain other items.

Averages based on all families.-All averages unless otherwise specified in the table are computed by dividing the appropriate aggregate by the total number of families in the group to which the aggregate applies and not by the smaller number of families in that group actu-

Whly making the expenditure for or having the indicated item. The average expenditure per family purchasing a given item may be readily computed by multiplying the average for all families in the group by the number of families in the group to obtain the aggregate foxpenditure and dividing this figure by the number of families purchasing.

Sales tax.-See appendix A, page 193, for method of handling sales tax.

## Notes on individual tables.

Table 1.-Distribution of jamilies, by economic level and income level
Frmilies have been classified by economic level according to the amount apent per expenditure unit, a messure which takes into account total family expenditure and family size and composition. The explanstion of this measure and its use trill be found on pages 23 and 229 ff .

Families have been classified by income level according to the net family income, . e., total family income minus nonfamily losses and business expense.

Tabls 2.-Deacription of fomilies atudied, by economic level
(See also tablea 5,19 , and 22 for the same data by other classifications)
For tabulation the classification of occupations was made on the basis of the Works Progresa Administration occupational classification. See appendix $D_{2}$ page 202.

The homemaker is the person reporting herself responsible for the management of the household, or in the case of two-generation families, the wife of the "head fof the family."

Household and aconomic family are defined on page 175. In this table, a person in the household or economic family for less than a year is breated as the appropriate decimal equivalent of a person.

The equivalent number of persons in the household is computed by adding the total number of weeks spent in the household by each member of the household, and dividing the reaulting aggregate by 52 (the number of weeks in a year). Number of equivalent persons in otber categories listed in the table are computed in the same menner.

Earnings.-Earninge include wagea, salaries, tips, industrial bonuses, and comfnissions. Amounts deducted by employers for pensions, insurance, annuities, fetc., are included in earnings, and also entered in table 14 as payment of premiums for insurance policies. If a worker, as for example, in the building trades, pays Ha helper, the workers ${ }^{*}$ earninge are entered as net, $i$. $e$., the pay to the helper is deduoted.

Not earningy from boarders and lodgers are grose payments for board and lodging minus the calculated cost of food for boarders. The cost of boarders' food is foomputed by dividing each family's annual food expenditure by the number of pood-expenditure units for all the persons eating in the household; the resulting food expenditure per-food-expenditure unit is then multiplied by the number of food-expenditure units for boarders.

Othor sed ronts are gross rents received from tenants less current expenditures paid out by the scheduled family in connection with rented property.

Pensions and insuranes annuities inolude veterans' pensions, pensions from employers, compensation reeeived under workmen's compenastion laws, unemploy-
ment benefits from trade-unions, etc., income from annuities purchased, and benefits from sickness, accident, theft, and fire insurance.

Gifts include money received from persons not members of the economic family. Such persons include persons members of the natural but not the economic family.

Other sources of income include net receipt from sale of home produce, winnings from gambling, court settlements, payment for child support, rebates, and dividend checks received on purchases bought through cooperative organizations, etc. In those ceses in which a worker away from home received a cash subsistence allowance, the allowance was entered as other money income and the expenditures for meals, lodging, etc., were included in the proper expenditure taßles. This case would be distinguished from that in which a saleaman, for example, received an allowance for mileage; in such a case the travel expenditure was considered business expense and no entry was made either for expenditure or corresponding income with the exception that net gains on such an account are entered as other money income.

Deductions from income (business losses and expenses) includes nonfamily lossesi. e., net losses on rented property (current expenditures for property minus gross rents received) and current expenditures on any unrented real estate other than own home. etc.. and net losses on traveling or subsistence allowances, and any other business expenses.

Nonbusiness losses, i. e., family losses, are not deducted from income but are treated as other family expenditures in table 16. For example, contents of a purse lost, or bail forfeited which had been posted for a friend, are treated as miscellaneous family expenditure.

Surplus or deficit.-See pages 176 and 177 .
Inheritance.-See page 178.
The number of gainful workers per family is the total number of persons gainfully employed at any time during the year. Each person is counted as one regardless of the length of his employment. The definition differs from that of the "gainfully occupied" as used by the census in that a person continuously unemployed through, out the year is not counted as a gainful worker. On the other hand a person is so counted even if his earninga were occasional and he does not necessarily regard himself as regularly in the labor market.

The chief earner is the member with the largest money earninga.
Table 3.-Expenditures for groups of items, by economic level
(See tables 6, 20 , and 23 for aame data by other classifications)
For the items included in each group of expenditures see table 8, Food; table 17. Clothing; table 10, Housing; table 11, Fuel, light, and refrigeration; table 12, Other household operation; table 18, Furnishings and equipment; table 13, Automobile and motorcycle purchase, operation, and maintenance, and other transportation; table 14, Personal care, medical care; table 15, Recreation; table 16, Education, vocation, community welfare, gifts, and contributions to persons outside economic family and other items.

Housing includes water, fuel, light, and refrigeration for families not making payment for these items separately from rent. (See tables 11 and 12.)

Percentagea are based on rounded dollar averages.

Table 4.-Disposition of money received during the schedule year nol used for current family expenditure and funds made available for family whe from sources other than fanily income, by economic level

In these tables only the cash or credit changes in assets or liabilities as shown in transactions during the schedule year are entered. That is, purchase of a share of stock is entered as "Increase in assets: Investment in: Stocks and bonds," but increase in the value of a share owned but not sold during the year is not recorded.

For each individual family only the net amount of the change in any individual item, where the items correspond in the two tables, is entered on the schedule. For instance, if a family deposits $\$ 200$ in a asvings account during the year and withdraws $\$ 250$, an entry of $\$ 50$ is made under "Decrease in assets: Reduction in cash: In savings account," and no entry is made under "Increase in assets: Increase in cash: In asvings account." The aggregate upon which the average for the item "Decresse in assets: Reduction in cash: In savings account," in table 4 is based is then the sum of the net reductions of savings account balances of all families having net reductions in their savings account balances. Similarly, the aggregate upon which the average for the item "Increase in asseta: Increase in cash: In savings account" is based is the sum of the net increase in savings account balances of all families having net incresses in their aspings account balances.

A transaction affecting two different items, such as the payment of a mortgage and the receipt of a loan with which to make the payment, is generally not entered as a single net amount, but the total amounts of both the payment and the loan are entered separately.

It should be noted that not all items in the two sections of the table correspond. Payments of premiums of inmurance policies are listed under "Average amount of funds disposed in: Increase in sasets." The corresponding item, receipta in the form of sinnuities, is not listed under "Average amount of funds received from: Decrease in assets," but is entered in tables 2,5, and 22 under "Receipts." Money from the sale of goods and chsttela is entered in table 4, but purchases of goods and chattels are entered in the appropriate expenditure tables. Money from inheritances is entered in table 4, but contrasting payments by the family scheduled (bequests to nonmembers) are listed under current expenditures as Gifts and contributions (table 16).

Investment in: Improvement in own home includes permaneat improvements such as the addition of a poroh or room, or installation of wiring for electricity. Repairs and replacements are not considered improvements, and are entered in table 10 as current housing expenditures.

Insestment in: Other real extats inchuding real setate mortgagea includes both improvements made on and purobase of real estate other than owned home. This item also includes purchase by the scheduled family of real estate mortgages.

Payment of premitum for insurance policies indudes amounts deducted from Wages for company insurance; trade-union dues when these entitled the payer to insurance benefita; paymente to other organisstions when they entitled the payer to insurance benefita; payments for combined life and aickness and disability ingurance when the amounts assignable to sickness and disability insurance are considered the smaller part of the total; "burial insurance" and payments to burial cocieties; and payments for life-inourance premiums for persons not members of the economic family.

Increase in outstanding loans to others includes increase in loans to any persons not members of the economic family.

Paymant of debts to: Firms selling on installment plan includes only payments for purchases made prior to the beginning of the schedule year. The entire
amounts due for goods purchased on installment during the sehedule year are entered in the appropriate expenditure tables.

Payment of debts to: Indioiduals inoludes payment of debts incurred prior to the schedule year to tradesmen, physicians, landlords, and other persons.

Payment of debts to: Other includes payment of debts incurred prior to the schedule year on charge accounts, taxes, assessments, etc.

Sale of property: Goads and chattels does not include articles "traded in" on the purchase. When, for instance, an allowance was made for the trade-in of an old ice-box in the purchase of a refrigerator, the amount of the allowance is not entered in any of the tables and the expenditure shown for the refrigerator (in table 18) is the price less the allowance. The same procedure was followed for automobiles, radios, and other items for which articles were "traded in" for credit.

Increase in liabilities includes debts incurred during the schedule year event though these were later wiped out by bankruptcy proceedings.
Increase in debts: Payable to firms selling on intallment plan includes balances due at the end of the schedule year on goods purchased on installment during the schedule year. For example, if a family incurred a bill of $\$ 250$ during the sehedule year for a suite of furniture purchased on the installment plan and paid installments totaling $\$ 150$ during the year, having a balance still owing of $\$ 100$ at the end of the schedule year, the following entries would appear: In table 18, current expenditure for furniture suite, $\$ 250$; in table 4, increase in debts payable to firms selling on installment plan, $\$ 100$.

Increase in debts: Payable to individuals includes unpaid debts incurred during the schedule year to tradesmen, physicians, landlords, and other persons.

Increase in debts: Other debts includes unpaid debte incurred during the schedule year on charge accounts, taxes, assessments, etc.

Inheritance.-See page 178.

## Table 5.-Description of families studied, by income level

(See tables 2, 19, and 22 for same dista by other classifications)
Data presented in this table are the same as those in table 2, except that the families have been classified by net family income level rather than by economi level. (See notes on table 2.)

Table 6.-Expenditure for groups of items, by income level
(See tables 3, 20, and 23 for same dats by other classifications)
Data presented in this table are the same as those in table 3, except that the families have been classified by net family income level rather than by economic leval. (See notes on table 3.)

Table 7.-Food used at home and purchased for consumption at home during 1 speek, by economic level

In order to avoid over-burdening the housemives who cooperated in the study the details of food purchases were requested only for the week preceding the agent's visit. In most cities the field work extended over more than one season. The: differences between the averages eeoured in the several quarters in such instances refleet not only geasonal differences in food purchases, but also accidental differences in the economic level and the national backgrounds of the families in the subsamples interviewed in the different quarters. It was, therefore, decided to publish in full for each city only the estimates for that season in which data were secured from the largest number of families.

For the Negro families in New York City, the number of families scheduled were distributed fairly evenly smong the four seasons, and the number giving information for any orre season was amall. The detsiled data on food for Negro families in New York were therefore summarized without regard to the season in which they were secured.

The number of equivalent full-time persons shown in table 7 is obtained by counting the total number of persons eating 21 meals at home during the week as the appropriate decimal equivalent of a person. A lunch prepared at home but carried and eaten away from home is included as a meal eaten at home.

For the method of obtaining the number of food-expenditure units, see appendix G, pages 229 and 230.
The quantities and expenditures entered in table 7 are for all food purchased for use by the household at home or prepared at home to be taken out during the week, including that for boarders, guests, and servants.

Dats were obtained for each of the following items-" number of families purchasing," "number of families using," "average quantity purchased," "average quantity used"-as well as "expenditure." Since the ouantities purchased and quantities used in 1 week were in the great majority of cases identical, only data on quantities purchased are presented in table 7, these figures may be compared with the figures on expenditures. Likewise, for most, although not all of the food items, the number of families purchasing and the number using was the same. Because of limitation of printing apace, only the figurea for families using are presented, they being needed to obtsin a complete picture of food consumption habits of the families atudied.

If comparisons are made between expenditures for quantities of foods at different economio levels, it should be noted that the composition of the families changes from one level to another. There are in general a larger proportion of adults at the higher economic levels. Since human needs for and customary consumption of various specific foods vary considerably for persons of different sge and sex and occupation, it becomes impossible to make a strict comparison of food consumption with needs at the different economic levels. Thus the needs for carbohydrates, protein, vitamins, etc., increase in differing ratios for different sex-age groups; children's need for milk is approximately twice as great as that for adults, while the need of heat-producing foods (starches and sugars) of adults is sbout twice as great as that of children. Children's meat consumption varies from that of adults at a atill different rate. In order to secure figures on quantities of and expenditures for individual foods purchased which would provide a reasonably satisfactory basis for comparison and yet not present a misleading appearsnce of refinement, data on family purchases of individual foods have been converted to a per capita basis.
Expenditures or quantity per food expenditure unit may be computed by multiplying the average expenditure or quantity per person shown by the average number of persons per family and dividing the product by the average number of food expenditure units per family. However, in interpreting such results, the faotor pointed out in the preceding paragraph must be considered, namely that a single food relative soale cannot be correatly descriptive of needs of persons of different sex and age for varying types of specific foods.

In considering quantities purchased it must be remembered that "pounds" are a measure of weight only, not of nutritional equivalence.

Table 7A.-Vegetablea and fruits purchased for consumption at home in 1 week in spring, summer, and fall quarters, by economic level

See notes on table 7, first paragraph, page 182. As regards purchases of fruits and vegetables, seasonal differences are so important that they probably outweigh any differences in the character of the subsamples in the different quarters. The materials obtained for New York City white familiea in three sessons are therefore published for this group of foods.

## Table 8.-Annual food expenditurea, by economic level

The figures for average annual expenditures for food exclude the computed cost of food consumed by boarders.

For the method of obtaining the number of food-expenditure units see appendix G, pages 229 and 230.

Meals bought and eaten away from home include tips.
Candy, ice cream, drinks, etc., bought and caten away from home includes expenditure for all between-meal food and drink consumed away from home.

## Table 9.-Housing facilitien, by economic level

The facilities described in this table apply to the dwelling occupied by the family at the end of the schedule year, and which may or may not have been the family's dwelling unit during the entire schedule year. No attempt was made by the field agents to determine whether or not a facility met any defined standard either as to quality or as to state of repair.

Average monihly rental rate is the rental rate for the house inhabited by the family at the end of the schedule year. (Note that this rate is not necessarily the same as that shown in table 10, Housing Expenditures, which is the average rate paid throughout the year.)

A detached house is free, standing with open space on all sides; a semidetached house has open space on three sides; a rove house has open space on two sides; a two-family house is one designed for occupancy by two families, one above the other.

Multiple dwelling.-A building designed for occupancy by three or more famllies has been classed as a multiple dwelling.

Garden space is defined as apace actually devoted to a garden or to a lawn on the premises or belonging to the dwelling.

Play space.-See page 193.

## Table 10.-Housing expenditures, by economic level

The type and amount of expenditure by a family for housing necessarily vary with type of tenure, dwelling, and manner of payment for hesting. Separate sections of the table are therefore presented for families who can be classified into homogeneous groups with respect to housing expenditures. These are: II, "Home owners"; III, "House renters"; IV, "Apartment renters with heat included in rent"; V, "Apartment renters with heat not included in rent." Families whose housing arrangemente changed during the year are not shown separately, but are inciuded in section I, "All families in survey." Section I therefore includes families shown in sections II, III, IV, and V, and families with the following housing arrangements: Owning a principal home during part of the year and renting a principal home during part of the year; having as a principal home a house for a part of the year and an apartment for a part of the year; renting as principal home an apartment with heat included in rent for a part of the year and an apartment with heat not included in rent fona part of the year.

A vacalion home is one which the family has for vacation purposes, and rents or owns simultaneously with its principal home. Simultaneous rental or ownership of a vacation home does not exclude families in sections II, III, IV, and V.

Investment in home includes down payments, payment of principal on mortgages, and permanent improvements (not repairs) on home.

In cases where the home owned and occupied by the family was a two-family house, only that portion of the investment or expenditure which applied to the owner's own living quarters has been included under "Average amount invested" or "Average current housing expenditure." The proportions used in making this allocation were based on the comparative monthly rental values of the two dwellings under consideration. The smount of housing expenditure allocated to the rented portion of the house was deducted from the gross rent received from the tenant to arrive at "Other net rents" (tables 2, 5, 19, and 22). The amount of the investment allocsted to the rented portion of the house was entered as "Investment in other real estate" (table 4).

Taxes.-Amounts due on "taxes" or "rent" are entered under these respective headings even if unpaid at the and of the schedule year. The amounts unpaid at the end of the schedule year are also entered in table 4 as "Increase in debts: Other debts."

Fire insurence and liability insurance.-No attempt was made to pro rate payments for previous or coming years. The total amount paid during the year was considered current expenditure.

Rent.-The rent reported covered the use of such facilities as heat, light, furniture, and water when these were provided by the landlord.

Families living in rented homes and aubrenting portions as apartments were scheduled provided there were separate meters for gas and electricity, that heat costs could be estimated, and that not more than two families (including the scheduled family) had dwellings there. In such cases only that amount of the rent, operating expenditures, and expenditure for repairs which applied to the portion of the house occupied by the scheduled family was entered. The remaining expenditures for rent, operation, and repairs were deducted from the gross rent received from the tenant to arrive at "Other net rente" (tables 2, 5, 19, and 22). The proportions used in allocating housing expenditure between the two families were based on the comparative rental rates of the two dwellings.

No attempt was made to allocate the cost of space rented to roomers.
Concessions are defined as the money value of rent given free by the landiord for a short time as an inducement to the family to rent the living quarters or to offset the expense of moving.

Apartments are defined as dwellings in multiple dwellings or in two-family houses designed for occupancy by two families, one above the other. (See notes on table 9, p. 184.) A dwelling consisting of rooms set apart for the use of the scheduled family within a house originally designed for oceupancy by one family was also classed as an apartment.

Rooms. - In the count of the number of rooms, dining rooms, living rooms, bedrooms, libraries, sewing rooms, kitchens, kitchenettes, and enclosed porches are included. Halls, closets, storerooms, pantries, open porches, laundries, slcoves, rooms used for business purposes, dinettes, and bathrooms are not included.

## Table 11.-Fuel, ligh, and refrigeration expendituret, by economic level

The type and amount of expenditure by a family for fuel, light, and refrigeration necessarily vary with type of dwelling and manner of payment for heating. Separate aections of the table are therefore presented for families whose axpenditures for fuel, light, and refrigeration may be considered homogeneous. Families whose type of dwelling or arrangement for payment for heating changed during
the year are not shown separately but are in section. I, "All families in survey." Section I therefore includes families shown in sections II, III, IV, and V and families with the following arrangements for type of dwelling or payment for heating: having a house part of the year and an apartment for part of the year; having heat included in rent or ownership payments during part of the year and not so included during part of the year; renting a home for part of the year and owning a home for part of the year.

It should be noted that several items listed in this table might have been used for purposes other than heating, cooking, lighting, and refrigeration. For instance, electricity is used for radios, curling irons, ete.; gasoline isused for cleaning.
Table 12 -Household operation expenditures other than for fuel, light, and refrigeration, by economic level

Water rent inciudes only water rent paid separately from rent for dwelling.
Telephone includes both subseription and pay-station costs.
Domestic service includes maid service, laundress, furnace man, etc.
Household paper includes toilet paper, wax paper, shelf paper, etc.
Stationery, pens, pencils, ink.-Expenditures for achool supplies are entered in table 16, under "Formal education."

Insurance on furniture is generally paid for a 3-year period. The entire expenditure was entered without regard to the period covered.

Interesi on debis does not include interest paid on mortgages on home (table 10).
Other items includes shoe polish, candles, clothes pins, clothes lines, grass cutting, snow shoveling, and tips to maids, janitors, elevator boys, and garbage collectors, etc.

Table 13.-Transportation expenditures, by economic level
The expenditure ahown for purchase of automobiles and motorcycles is the purchase price less allowances for the trade-in of old cars and includes carrying charges for installment purchases.

Garage rent and parking includes in some cities a special tax levied on private garages for purposes of fire inspection. See page 193.

Rent of automobile and/or motorcycle includes expenditures for gasoline, oil, etc. for a vehicle not owned by the family. It usually covered payment to a neighbor for rides to work in his car, or payment for gasoline and oil for operation of a borrowed car.

Other transportation expense includes dues for membership in automobile clubs.
Table 14.-Personal care expenditures, and medical care expenditures, by economic level
Personal care services.-A combination beauty or barber service charge was prorated among the aervices supplied.

Other waves includes marcel, water, or finger wave.
Other personal care services includes facial treatments, massage, etc.
Toilet soap doea not include laundry soap used for personal care.
Tooth powder, tooth paste, mouth washes does not include soda and salt used for the cleaning of teeth.

Cosmetics and toilet preparations includes paper handkerchiefs and sanitary napkins $8 s$ well ss face powder, rouge, perfume, etc.

Under Brushes, razor blades, and ather toilet articles are included compacts and mirrors.

Medical care-Frequently families know definitely the total expenditure inourred for an illness but were not sure of the correct allocstion among tuch items as physicians' services, hospital room, operating room charges, and medi-
cines. Whenever possible flat rate chargea for such services as obstetrical care or tonsillectomy were prorated among the services received. Where information for such prorsting could not be furnished, the entire charge was entered as expenditure for general practitioner, specialist, or clinic as the case might be. Therefore expenditures for total medical care are probably more accurate than expenditurea for individual items of medical service.

Specialist and other practitioner includes osteopaths, ehiropractors, midivives, Christian Science practitioners, etc., as well as heart specialists, pediatricians, eye, ear, nose, and throat specialists, etc.

Medicine and drugs includes the cost of filling prescriptions, home remedies patent medicines, adhesive tape, bandage, etc. Cod-liver oil was classified as a food. (See table 7.)

Eyeglasses includes the cost of examination when the examination was given by the same person or firm from whom glasses were purchased.

Medical appliances ineludes hot water bottles, crutches, etc.
Accident and heallh insurance.-When accident and health insurance premium payments are included with payments for life insurance and the life insurance portion is considered the greater, the expenditures are not entered in table 14 but in table 4 under "Payment of premiums for insurance policies: Life insurance."

Other medical care includes expenditures for X-ray, operating room, blood transfusions, circumcision, etc.

Table 15.-Recreation expenditures, by economic level
Cameras, films, and photographic equipment includes cost of films and developing. Alhletic equipment and supplies does not include clothes for sports. Expenditures for sport clothes are entered in table 17.

Peta (purchase and care) includes dog licenses and food purchased especially for pets.

Entertaining: In home, except food and drinks includes bridge prizes, etc.
Other recreation includes amusement park and dance hall admissions, 1-day boat excursions, losses at cards, gambling and betting, cost of lottery tickets. Christmas-tree decorations, expenditures for hobbies not elsewhere classified, admission to fairs, spending money assigned to individual family members of which no account could be given.

Tably 16.-Formal education, nocalion, community welfare, aifts and contributions, and miscellaneous expenditures, by economic level

## Formal education

Expenditures for members away from home include tuition and school supplies but not the cost of board and lodging or school uniforms for membert attending sehool away from home.

Expenditures for members at home include tuition, books, atationery and supplies, fees for music and dancing lessons, etc., paid for by the economic family,

Tuition in most public elementary and secondary schools and in some colleges is tree.

## Vocalion

Union dues or fees.-Payments to trade-unions with life insurance plans, where dues and life insurance premium payments cannot be separated, are entered on table 4 as "Payments of premium for insurance policies: Life insurance."

Other liems of vocotional sipense include chauffeurs' licenses, tools, fees to employment offices, tots.

Community welfare
Taxes.-Poll, income, and personal properly. See page 193.
Gifts and contributions
This section includes only gifts to persons not members of the economic family. Gifts to organizations or institutions are not included, but are listed under "Community welfare."

Chrishmas, birlhday, etc., gifts include money, gifte, and purchase price of items given to nonmembers of the economic family.

Support of relatives includes money sent to relatives whether living in the United States or in foreign countries. It also includes contributions to the funeral expense of a relative not a member of the economic family.

## Miscellaneous Eapenditures

Losses includes only family or nonbusiness losses. Examples of such losses are payment of notes of personal friends endorsed by members of the economic family; bail paid for a friend who jumped bail; premiums paid during the schedule year on insurance or annuities forfeited through failure to keep policies up to date; sceidentsl loss of cash; payments on items bought on the installment plan and lost for nonpayment on installments, without recompense for amounts paid. Business losses are deducted from family income, see page 180.

Other includes dues and contributions to political organizations, expenses for mariage licenses, christenings, bail, fines not connected with traffic violations., etc.

## Table 17.-Clothing expenditures, by economic level

All figures in table 17 with the exception of those in section I are based upon data for persons dependent on family funds for 52 weeks. Expenditures for persons dependent on family funds for less than 52 weeks are not shown in the sections for different sex and age groups but are included in the total shown in section I. These expenditures have been excluded from the detailed sections for the reason that clothing expenditures for a person dependent on family funds for only part of the year would be unrepresentative, aince the family might buy all or none of the year's clothing supply for that person during the period he was dependent on family funds.

In addition to the data shown in the clothing table, the following totals and averages, if desired, may readily be computed from the data in the table:

1. Average number of articles purchased per person purchasing. ${ }^{1}$
2. Average expenditure per person purchasing. ${ }^{1}$
3. Average number of articles purchased per family having members in the designated group.
4. Average expenditure per article per family having members in the designated group.
5. Average price paid per article purchased.
6. Average number of articles purchased per family (all families).
7. Average expenditure per family (all families).
(1) To secure the average number of artiches purchssed per person purchasing ${ }^{2}$ in a given sex and age group at a given economic level, multiply the average number of articles purchased per person (sll persons) by the total number of persons in the specified group. This result is the total number of articles purchased. This figure divided by the number of persons purchasing ${ }^{1}$ yields the average number of articles purchased per person purchasing. ${ }^{1}$ For example,

[^1]using figures on number of felt hats purchased for white men 18 years of age and over in families with expenditure per expenditure unit under $\$ 400$ :
a. Total number of families.......................................... 194
b. Number of families having men 18 years of age and over... 189
c. Number of men 18 years of age and over..................... 264
d. Average number of men per family having men.-....-.- 1.40

Hats (felt):

f. Average number of articles per person (all persons) ....... . 42
g. Average expenditure per person (all persons) ............... \$1. 11
h. Total number of hats purchased ( $f \times c$ ) ....--------------- 111

| i. Average number of hats purchased per person purchas- |
| :--- |
| ing ${ }^{1}(h+e)$ |

(2) Similarly to obtain the average expenditure per person purchasing ${ }^{1}$ in a apecified sex and age group at a given economic level multiply the average expenditure per person (all persons) by the total number of persons in the specified group. This result is the total expenditure for hats for thig group, which when divided by the number of persons purchasing ${ }^{2}$ yields the average expenditure per person purchasing. ${ }^{1}$ For example, using the figures given above:
j. Total expenditure for hats by the group $(g \times c) \ldots \ldots . \ldots \$ 293.04$
k. Average expenditure for hats per persons purchasing ${ }^{1}$
$(j+e)$
(3) To obtain the average number of articles purchased per family having members in a designated sex and age group at a given economic level, divide the total number of articles purchased in that group (computed in accordance with the instructions in paragraph (1) above) by the number of families in the group. For example, again using the figures given above:
h. Total number of hats purchased $(f \times c$ ) $\ldots$.-.-.................. 111
(Note this total has already been computed above.)
2. Average number of hats per family in the group $(h+b) \ldots . .59$
(4) To obtain the average expenditure per article per family having members in a designated sex and age group at a given economic level, divide the total expenditure per article (computed in accordance with the instructions in paragraph (2) above) by the number of families in the group. For example, using the same figures given above:

> j. Total expenditure for hate by the group $(g \times c)$
> (Note this total has already been computed above.)
> m. Average expenditure for hats, per family in the group $(j+b)$
(5) To obtain the average price paid per article purchased divide the total expenditure for a given article for a given sex and age group at a given economic level (as computed in accordance with the instructions in paragraph (2) above) by the total number of articles purchased (as computed in accordance with the instructions in paragraph (1) above). For example, using figures shown above:
j. Total expenditure for hats by the group ( $g \times c$ ) $\ldots$......... $\$ 293.04$
(Note this total has already been computed.)

(Note this total has already been computed.)


[^2](6) To obtain average number of articles purchased per family (all families) at a given economic level, divide the total number of articles purchased by all families at that economic level. For example, using the same figures:

(7) To obtain average expenditure per family (all families) at a given economic level, divide the total expenditure for the given article by all families at that economic level. For example, using the same figures:

> j. Total expenditure for hats by the group $(0 \times c) \ldots \ldots$ p. Average expenditure for hats per family $(j \div a)$

Section I.-For method of computation of number of clothing expenditure units per family see appendix $G$, page -. This computation is based on all members of the economic family, whether or not they were dependent on the family fund for 52 weeks.

Ready-made clothing, dry aleanind and accessories includes all items listed in sections III through XI for persons dependent on family funds for 52 weeks plus such expenditures for persons dependent on family funds for less than 52 weeks.

Yard goods and findings. - Findings include thread, needles, scissors, buttons, etc.
Clothing received as gifts includes neckties, stockings, etc., received as Christmas and birthday gifts from persons outside the economic family. It also includes second-hand clothes given to the family.

Expense for uniforms, etc., for work are included in clothing expenditures (not as vocational expense in table 16 nor as losses or business expense in tables 2,5 , 19 , and 22).

Section II.-The figures in section II are based on data only for persons dependent on the family funds for 52 weeks.

Sections III through XI.-In these sections the figures are based on data only for persons dependent on the family funds for 52 weeks. Total for each sex and age group does not include expenditures for yard goods and findings and paid help for sewing. These are presented only in section I for all sex-age groups combined.

Boys: Play suits are heavy suits for children's outdoor wear.
Men and Boys: Shoes, work.-Are shoes for heavy work, not, for example, shoes worn to work by a white-collar employee.

Men and Boys: Shoes, other.-Includes bedroom slippers.
Men and Boys: Accessories.-Includes belts, suspenders, collar buttons, shoestrings, etc.

Men and Boys: Other.-Includes jewelry and watches, and rental charges for uniforms and aprons. In cases where rental and laundering charges for uniforms and aprons could not be separated, the entire amount is entered here.

Women and Girls: Dresses, cotton, house,-Are defined as cotton dresses bought for housework.

Women and Girls: Accessories.-Includes hsirpins, hairnets, belts, sanitary belts, dress ornaments, etc.

Women and Girls: Other.-Includes jewelry and watches, and rental charges for uniforms and aprons. In cases where rental and laundering charges for uniforms and aprons could not be separated the entire amount is entered here.

## Table 18.-Furnishings and equipment expenditures, by economic level

For the method of entry of expenditures for items bought on the installment plan and with trade-in allowances see page 182.

For computation of averages other than those presented in this table, for example, "average number of articles purchased per family purchasing" or "aver"
age expenditure per family purchasing," calculations similar to those outlined for table 17 can be made (see pp. 188 and 189).

Textile furnishings: Other includes paid help for making curtains, furniture covers, etc., yard goods used in making home furnishings.

Miscellaneous equipment: Other includes paint and lumber for repair of household equipment, play pens for children, and typewriters.

Note that radios are not classed as "Furnishinga and Equipment" but as "Recreation," table 15.

Tables 19 and 20.-Description of families studied at three economic levels and expenditures for groups of items at three economic levels
(See tables 2, 3, 5, 6, 22, and 23 for same dats by other classifications.)
These tables are presented with families classified into three economic levels in order to facilitate comparison with the data from other cities which will be classified for these three levels and published in other bulletins. The greater size of the sample in larger cities permitted a finer break-down in tables 2 and 3 than was justified by the data for the smaller aamples. In tables 19 and 20 the same data as in tables 2 and 3 are grouped into identical classifications regardless of size of sample, as follows: Families spending under $\$ 400$ per expenditure unit per year, those spending $\$ 400$ to $\$ 600$, and those spending $\$ 600$ and over.

Table 21.-Distribution of families of types comparable with those studied in 1917-18, by economic level and income level

Tably 22.-Description of families of types comparable with those studied in 1917-18, by income level

Tably 23.-Expenditures of families of types comparable with those studied in 1917-18 for groups of iteme, by economic level
(See tables 1, 2, 3, 5, 6, 19, and 20 for same data for all families in present study.)
Since the rules for inclusion of families in the 1917-18 study differed from those in the 1934-36 study, data for the family types in the latter study most nearly meeting the eligibility requirements of the former study are presented in these tables to facilitate comparison. Data for families of the following types are included: Man, wife, and one child; man, wife, and two to four children; man, wife, and five or more children; man, wife, and children and adults (four to six persons) ; and man, wife, children, and adulta (seven or more persons).

Tabla 24.-Coeffcients of variation of money disbursements at successive income levels

The coefficient of variation is computed by dividing the standard devistion by the average expenditure and multiplying by 100 . The standard deviation represents the square root of the mean of the squares of the differences between each item and the arithmetio average of the items.

The purpose of the coefficient of variation is to express as a percentage the dispersion about the average, independently of the size of that average. . The variation of expenditures for items of different magnitude can thus be compared direotly. For example, in dollars, expenditures for food are typically much greater than those for personal care. Nevertheless their variation may be compared through a figure which expresses dispersion about the mean in relative terms, the coefficient of variation.

When families are distributed by the amount of their expenditures for various groups of items, it is found that the curves for food and housing most nearly re-
semble the normal curve, although more families are to be found above the mode than below it. Among the other major categories of expenditure, those for furnishings and equipment, transportation, and medical care have a distribution far from that of the normal curve. Many families made no expenditures or spent very small sums for these items; a few families apent relatively large aums. Only a amall number of the families spent suma near the average expenditure; in other words such distributions are very much skewed. Therefore, the coefficients of variation are of value in showing the extent of the dispersion but they should not be used to estimate the range within which a given proportion of the values from a new sample would fall.

Coefficients of variation were not computed for gifts, contributions to community welfare, educstion, vocation, and miscellaneous items due to the number of families making no expenditures for these items.

Using the "method of rankg" the difference between the variations for the items shown at successive income levels was found to be not statistically aignificant when family types were considered separately. With family types combined, a negative correlation of border line significance was found between incoms level and size of the coefficient. For method, see "The use of rank to svoid the assumption of normality implicit in the analysis of variance," by Milton Frledman, in Journal of the American Statistical Association, vol. 32, No. 200, pages 675-701.

## Table 25.-Empenditures for groupe of items estimated from regression equation

The figures in this table were computed by fitting a regression line to the actual expenditure data, using the equation $Y=a+b X^{3}+c X$, where $X$ is annual net income. The average actual expenditure of each three hundred dollar income group was given equal weight in fitting the ourve.

Experiments were carried out with straight lines and other forms of curves and with various systems of weighting. For personal care, medical care, household operation other than fuel, light, and refrigeration, gifts, and miscellaneous items there appeared to be a true linear relationship. For food, clothing, housing including fuel, light, and refrigeration, transportation, recreation, and furnishings snd equipment, the equation $Y=a+b \bar{X}+c X^{2}$ gave a better fit than did the equation $Y=a+b X$. However, for several casea, particularly that of housing, the curve yielded by the equation $Y=a+b X+c X^{3}$ turned downward at the higher income levels, so that at very high income levels there appeared to be actually a. negative expenditure for housing. The equation $Y=a+b X^{\frac{1}{2}}+c \bar{X}$ gave an equally good fit for those expenditure items which appeared to have a definitely linear relationship to income and also had the added merit that it did not turn downward at higher income levels for those items for which a curvilinear relationship was indicsted.

Use of the average actual expenditure for each income group yielded practically the same results as would have been obtained by using each individual observation, and resulted in a material economy of time. Weighting by number of cases; total expenditure, or the ratio of total expenditure to the number of cases, etc., msterially increased the amount of work and time required for fitting, but did not yield significently better results.

## Local Conditions Affecting the Data.

Employment and cost of living.-In November 1934 the New York State Labor Department index of monthly employment in New York City manufacturing industries was 77.3 percent of the average employment in 1923-25, and monthly pay rolls 65.9 percent of average
monthly pay rolls in 1923-25. In the same month the Bureau of Labor Statistics cost of living index stood at 82.1 as compared with 100 for 1923-25 for New York City. The materials on family income and expenditures in the earlier schedules obtained apply to the year ending August 31, 1934, but the greater part of the data ( 65 percent) apply to the year ending August 31, 1935. Living costs during the entire period represented by the material collected average 82.7 as compared with 100 in 1923-25. The New York employment index, on the same base, averaged 76.0 and the pay rolls index 66.7 for the entire period represented by the schedule data. The proportion of the data applying to different months was taken account of in computing these averages.

Taxes, special assessments, fees, etc.
Sales tax.-The New York City sales tax went into effect December 10, 1934, and remained in effect throughout the remainder of the period covered by the schedules. A tax of 2 percent was paid on the sale price of all tangible personal property sold at retail (with the general exception of food, water, medicines, newspapers, and periodicals), gas, electricity, steam heat, refrigeration, telephone and telegraph eervice, food and entertainment in restaurants when the charge is $\$ 1$ or more, wines, liquors, and other alcoholic beverages (except beer).

The tax is applied to purchases as follows:

| 1 to 12 cents. | No tax |
| :---: | :---: |
| 13 to 62 cents | 1 cent tax |
| 63 to 99 centa | 2 cents tax |

On every dollar purchase, 2 cents plus the above rate on the amount in excess of even dollars is charged. In the expenditure data presented in this report, the sales tax is included as part of the expenditure item on which it is paid.

Poll and personal property tax.-There is no poll or personal property tex on citizens of New York City.

Income taxes.-Residents of New York City are subject to New York State and Federal income taxes. Families with incomes under $\$ 2,500$ are exempt from the State tax, and also from the Federal tax.

Special fees.-There is in effect in New York City a tax on garages for purposes of financing fire inspection.

## Other special factors affecting data on:

Housing facilities.-Because of the crowded living conditions in New York City it was deemed advisable to obtain information on whether or not play space was available to these New York families in connection with their dwellings. Play space was defined as space to which the family has a right because of living in the dwelling but which is not designed primarily for other purposes, as for example the yard of a private dwelling or a play room in an apartment house.

Expenditures for food.-The diets of various nationality and race groups presumably have a marked effect on their food expenditures but funds were not available for the analysis of food expenditures by the country of origin of the homemaker.

Home-delivered milk in New York at the time field work was in process cost from 1 cent to 2 cents more than milk purchased in a store. Milk was distributed from city milk stations in the poorer sections of the city at 8 cents per quart.

## Appendix B

## The Scope of the Investigation

## Geographic area covered in New Tork City.

The families studied were confined to New York City limits, i. e., the boroughs of Brooklyn, Bronx, Manhattan, Queens, and Richmond.

## Scope of the Nationwide study.

In addition to New York City, 41 other cities with population over 50,000 were covered in the investigation of the money disbursements of wage earners and lower-salaried clerical workers. Data from both native and foreign-born white families were secured in all cities and from Negro families in the cities indicated in the following list. The results of investigations in the other large cities will be summarized in five bulletins, as follows:

North Allantic Region (B. L. S. Bull. 637, vol. II):

Boston, Mass.
Buffalo, N, Y.
Johnstown, Pa.
Lancaster, Pa .
Manchester, $\mathrm{N} . \mathrm{H}$
Pbiladelphia, Pa. (White and Negro families.)

Pittsburgh, Pa.
(White and Negro families.)
Portiand, Maine.
Rochester, N. Y.
Scranton, Pa .
Springfield, Mass.

East North Central Region (B. L. S. Bull. 636):

Cineinnati, Ohio
(White and Negro families.)
Cleveland, Ohio.
Columbus, Ohio.
Detroit, Mich.

Grand Rapids, Mich
Indianapolis, Ind. (White and Negro families.)
Lansing, Mich.
Milwaukee, Wis.
West North Central and Mountain Region (B. L. S. Bull. 641):

Denver, Colo.
Kansas City, $\mathrm{Mo}_{\boldsymbol{3}}$ and Kansas City, Kans.
(White and Negro families.)
Southern Region (B. L, S. Bull. 640):
Baltimore, Md.
(White and Negro families.)
Birmingham, Ala.
(White and Negro families.)
Dalles, Texas.
Houston, Texas.
(White other than Mexican and Mexican families.)
Jackson, Mibs.
(White and Negro families.)
Jackaonville, Fla.
Louisville, Ky.
(Whits and Negro families.)

Minneapolis and St. Paul, Minn. St. Louis, Mo.
(White and Negro families.)
Salt Lake City, Utah.

Memphis, Tenn.
(White and Negro families.)
Mobile, Als.
(White and Negro families.)
New Orleans, La.
(White and Negro families.)
Norfolk-Portsmouth, Va.
(White and Negro families.)
Richmond, Va.
(White and Negro families.)

Pacific Region (B. L. S. Bull. 639):

Los Angeles, Calif.
(White other than Mexican and Mexican families.)
Sacramento, Calif.

San Diego, Celif.
San Francisco, Calif. Seattle, Wash.

42 Cities in the United States (B. L. S. Bull 638):
With the cooperation of various State authorities correlated studies of the money disbursements of wage earners and clerical workers have been made in the following cities under 50,000 population: (1) In New Hampshire: Berlin, Claremont, Concord, Conway, Dover, Keene, Laconia, Littleton, Nashua, Portsmouth; (2) in Michigan: Marquette; (3) in California: Modesto; (4) in Nevada: Reno:

Summaries of the data secured in these smaller cities have been published in the Monthly Labor Review for March 1936; June 1936; and September 1937.

Early in 1936 the Bureau of Labor Statistics undertook a Study of Consumer Purchases which covers all income groups in 32 different cities. Funds were allotted to the project by the Works Progress Administration. At the same time a coordinated study was undertaken by the Bureau of Home Economics in 66 farm counties, and in 140 villages, and in 19 small cities. Both of these investigations were made in cooperation with the National Resources Committee and the Central Statistical Board.

The cities covered in the coordinated Studies of Consumer Purchases are as follows:

Bureau of Labor Statistics

| Aberdeen-Hoquiam, Wash. | Denver, Colo. Dubuque, Iowa. | Omaha, Nebr.-Council Bluffs, Iowa. |
| :---: | :---: | :---: |
| Albany, Ga. | Everett, Wash. | Peru, Ind. |
| Atlanta, Ga. | Gastonis, N. C. | Portland, Oreg. |
| Beaver Falls, Pr. | Haverhill, Mass. | Providence, R. I. |
| Bellingham, Wash. | Logansport, Ind. | Pueblo, Colo. |
| Billings, Mont. | Mattoon, 11. | Springfield, Ill. |
| Butte, Mont. | Mobile, Als. | Springfield, Mo. |
| Chicago, Ill. | Muncie, Ind. | Wallingford, Conn. |
| Columbia, S. C. | New Britain, Cona. | Willimantic, Conn. |
| Columbus, Ohio | New Castle, Pa . |  |
| Comnellsville, Pa . | New Yorl, N. Y. |  |
| Bureau of Home Economics |  |  |
| Astoria, Ore | Greenfield, Mass. | New Philadelphia, Ohio. |
| Beaver Dam, Wis. | Griffin, Gs. | Olympia, Wash. |
| Boone, Iowa. | Klamath Falls, Oreg. | Provo, Utah. |
| Columbia, Mo. | Lincoln Ill. | Sumter, S. $\mathbf{C}$. |
| Dodge City, Kans. | Logan, Utah. | Westbrook, Maine. |
| Eugene, Oreg. | Mt. Vernon, Ohio. |  |
| Greeley, Colo. | Moberly, Mo. |  |

## Appendix C

## Period Covered by Study

Table A shows the time period to which the data in the New York schedules apply.

Thus 65.2 percent of the schedule data for white families apply to the quarters falling within the year June 1, 1934, to May 31, 1935; 61.0 percent of the Negro data to the schedule year September 1, 1934, to August 31,1935 ; and 64.7 percent of the combined white and Negro data apply to the schedule year September 1, 1934, to August 31, 1935.

Table A.-Period covered by scheduled data, New York City

| Ferlods covered by white and Negro schadules | Total | Number of schedules covering the schedula year of- |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Sept. 1 19833, to Aug. 31, 1084 | Dec. 1, <br> 1935, to NBT. 30, 1884 | Mar. 1, 1834, to Fob. $\left.{ }^{2}\right)_{2} 1936$ | $\begin{aligned} & \mathrm{Jman} 1, \\ & 1934,10 \\ & \mathrm{May} \\ & 31,1296 \end{aligned}$ | 80pt. 1 <br> 1834, to Aus. <br> 81, 1935 | Dec. 1, <br> 1034, to 80,1095 | Mar. ${ }^{1,}$ <br> 1936 , to Peb . <br> 20, 1983 |
| White familles: |  |  |  |  |  |  |  |  |
| Schedule year.........-.-.-.-.-.-.--- | 897 | 17 | 147 | 178 | 108 | 800 | 214 | 37 |
|  |  |  |  |  |  |  |  |  |
| Dec. 1, 1933, to Feb. 2s, 1934. | 104 | 17 | 147 |  |  |  |  |  |
| Mar. 1,1034 , to May 31, 1034. | 843 | 17 | 147 | 179 |  |  |  |  |
| June 1, 1834, to Aug. 31, 1934,- | 431 | 17 | 147 | 179 | 108 |  |  |  |
| Sept. 1, 1834, to Nov. 80, 1034- | 634 |  | 147 | 170 | 108 | 200 |  |  |
| Dee. 1, 1234 , to Feb. 28, 1085, | 301 |  |  | 178 | 108 | 200 | 214 |  |
| Mar. 1, 1935, to May 31, 1985- | 654 |  |  |  | 108 | 200 | 214 | 32 |
| Juns 1, 1835 , to Aug. 81, 1935. | 446 |  |  |  |  | 200 | 214 | 32 |
| Sept. 1, 1885, to Nov. 30, $1035 . \mathrm{c}$ Dee. 1, 103, to Fob. $2,1036$. | 246 |  |  |  |  |  | 214 | 32 |
|  | 32 |  |  |  |  |  |  | 32 |
| Nothedule year .........-...........--- | 100 |  | 13 | 25 | 7 | 12 | 23 | 17 |
| Scluedulo quartart |  |  |  |  |  |  |  |  |
| Dee. 1, 1083, to Fob. \%, 1084- | 13 |  | 13 |  |  |  |  |  |
| Mar. 1, 1934, to May 81, 1894- | 38 |  | 13 |  |  |  |  |  |
| June 1, 1934, to Aug. 81, 1934- | 46 |  | 13 | 26 |  |  |  |  |
| Sopt. 1, 1034 to Noy, 20, 1034 Dee. 1, 1034 , to Fobs 28, 1885. | 87 |  | 13 | 25 | 7 |  |  |  |
| - Dec. 1, 1034, to Fobr 28, 1085 - | 70 |  |  | 25 | 7 | 12 | 28 | 17 |
| June 1, 1935, to Aug. 81, 1035. | 58 |  |  |  |  | 12 | 28 | 17 |
| Sept. 1, 1985, to Nov. 30, 1935-1 | 43 |  |  |  |  |  | 26 | 17 |
| Dec. 1, 1085, to Fels, 20, 1036.-1 | 17 |  |  |  |  |  |  | 17 |

## Appendix D

## Selection of Families to be Interviewued

## Method of Choosing the Sample

The method to be used in choosing the sample to be included in a study of employed wage earners and clerical workers presents a serious problem in the absence of a recent census giving for every family, at each address, the occupation of all the earners in the family, and the relief status of the family in the last year. Since no census data were available for use in this investigation, it was decided to use employers' current lists of employees as the basis for sampling in all the cities where the study was carried on. The methods used differed from city to city only insofar as the available data on the names and addresses of employers and the number of their employees differed from city to city.

In New York City the most complete and up-to-date list of employers was located through the New York State Department of Labor. The file covers all employers of 10 or more persons and includes industrial establishments, banks, insurance companies, wholesale and retail distributors, hotels and restaurants, transportation companies, public utilities, Federal, State, county, and city governments. It is maintained for the purpose of administering the State's factory inspection and workmen's compensation insurance acts and serves as a basis for the State's industrial directory. At the time the sample was chosen the file included the names of approximately 30,000 employers in New York City. The file did not contain information on the number of employees in each establishment at the time the sample was chosen. Because of the unusually great number of employers and absence of information regarding the number of their employees, a particular procedure was followed in New York City. The name of every thirtieth employer was chosen to use as the first basic list for the sample. The first, visits were made to every fourth employer in the basic list of 1,000 employers. When these names were exheusted a second list was drawn, and so on until between 300 and 400 employers had been visited and the names of 1,000 sample employees had been secured.

The original file in the New York State Department of Labor did not contain the number of employees in each establishment at the time the sample was drawn. To remedy this the number of employees
on the pay roll ${ }^{1}$ at the time of the field investigator's visit was ascertained and the employee names chosen in the following ratios: ${ }^{2}$

In plants with 1 to 19 employees, 1 sample employee chosen.
In plants with 20 to 99 employees, 3 sample employees chosen.
In plants with 100 to 299 employees, 5 sample employees chosen.
In plants with 300 to 499 employees, 7 sample employees chosen.
In plants with 500 employees and over, 9 sample employees chosen.
The position of the first name to be drawn from each emloyee listp was determined by a number chosen by lot; and if more than one name was to be drawn, the others were taken at equally distant spaces down the list. For example, at an establishment with 79 employees where 3 names were desired, any number between 1 and 26 was drawn by lot. If this number chanced to be 12, the employee names drawn from that establishment were the 12 th and the 2 names equidistant from that by 26 spaces, or the 12 th , 38 th, and 64 th names, respectively.

Since the investigation was limited to the families of employed workers, all persons on employer lists were not eligible for scheduling (see pp. 201-204, for rules for determining eligibility). Employer lists did not give the information necessary to determine eligibility, such as whether or not the employees listed were members of families, whether or not their families had been on relief during the past year, etc. Therefore, the five names listed directly after the name of the "sample employee" were chosen as possible substitutes for the name of each sample employee drawn. If the name of the last sample employee to be chosen was drawn too near to the end of the list to secure the five substitute names in the usual way, the list of substitutes was completed by taking the names at the beginning of the list of employees in the same establishment.

If it was found that the family of the first worker whose name was drawn was not eligible ${ }^{8}$ for the study, a field worker was sent to the

[^3]substitute drawn for his name. If these five substitutes were exhausted without securing an eligible family, a new series of names from another employer was substituted. In the case of Negro employees, a different method was used, since it proved to be very difficult to secure the sample of employed Negro workers. The wage level of the Negro group was below that of the white group and because the proportion of the unemployed among Negro families was larger than among white families, when a series of names of Negro employees in the New York City study was exhausted, a schedule was secured from the first eligible Negro family residing to the right of the last ineligible Negro employee in the exhausted series of employee names.

A separate card was made out for each name drawn from the employee lists and the substitute files were kept separate from the original file of sample employees. The original cards and the substitute cards were filed separately for the white and Negro samples.

## Rules for. Determining Eligibility of Families

A schedule was secured from the family of each sample employee if he was eligible according to the following criteria, unless for some reason the family was unwilling to give the information.

1. Contact through the chief earner.-It is clear that families with more than one earner are over-represented in the employers lists as compared with one-earner families. By adopting the rule that families would be scheduled only if the name drawn in the sampling process turned out to be that of the chief earner-i. e., the member earning the largest amount of money during the year-the danger of a biased sample was avoided. Each family, regardless of the number of earners, was represented by one and only one name that counted.
2. Occupation of chief earner. - In each family included in the sample, the chief earner is either a wage earner or lower-salaried clerical worker. The classification of occupations according to economic groups presented by A. M. Edwards ${ }^{4}$ in an article based on census data was used in determining whether a person of given occupation should be considered a wage earner or a clerical worker. An exception was made in that families in which the chief earner was a foremanoverseer, or domestic servant in a private family, were not included although these occupations are treated in the Edwards' classification as wage earners. As the study progressed the need for a more detailed classification of jobs became evident. When the Federal Emergency Relief Administration and the Works Progress Administration issued a manual, giving more detailed instructions for classification adapted from the classification of the census of 1930, the new instructions were employed to assist in the problem of determining

[^4]whether or not a specific type of work should properly be treated as part of the occupational group being covered by this investigation. ${ }^{5}$ The investigation covered families of chief earners in the groups classified as office workers, salesmen, and kindred workers; skilled and semiskilled workers in building and construction; skilled and semiskilled workers in manufacturing and other industries; unskilled laborers and domestic and personal service workers (except in private families). In a few instances where the chief earner was found to bave pursued two occupations during the year prior to the visit of the field investigator, one an occupation classified as wage earner or clerical, and the other as a profession or as the proprietor of an owned business, it was ruled that the family was to be included in the study unless the earnings from the profession exceeded the earnings from the wage earning or clerical occupation, or unless the income from the owned business was more than one-half the earnings from the wage earning or clerical occupation, or the expenses from the business could not be separated from the family expenses.
3. Earnings of chief earner.-No family in which the chief earner had earned less than $\$ 300$ during the schedule year was included. No family in which the chief earner was a clerical worker, earning $\$ 2,000$ and over during the schedule year, or $\$ 200$ or over during any one month was included, but no upper limit was placed on the earnings of wage earners nor on total earnings of all members of the family combined.
4. Occupation and income of subsidiary earners.-No restriction was placed upon the occupation of supplementary earners with the one exception noted below. A family in which there was a subsidiary earner who was, for example, a professional worker or a domestic servant in a private home, was included provided the annual earnings of this worker were less than those of the chief earner. Families were excluded if a supplementary earner was in business for himself and his business income and expenditure were so intermingled with the family's that it was impossible to separate them (as for example, a family where the wife carried on a small hair-dressing business in, or adjacent to, the family's living quarters and used for the business, gas and electricity recorded on the same meters as those recording the gas and electricity used for the operation of the household.) Families in which a supplementary earner was in business for himself were included if the business income and expenditure could be separated from that of the family and the net income from the owned business was less than half of the chief earner's earnings.

[^5]If a supplementary earner was a clerical worker and earned $\$ 2,000$ or more during the schedule year or $\$ 200$ or over during any one month; the family was ineligible for inclusion in the sample.
5. Employment minimum. - In order to avoid the distortion of spending which results from prolonged unemployment and unanticipated curtailment of employment the study was limited to the families of employed workers. It was impossible to locate any figures as to the number of days of employment characteristic of wage earners and clerical workers. It was, therefore, necessary to set an arbitrary limit below which a worker would not be regarded as having been employed for the schedule year. It was decided to include only families in which one wage earner or clerical worker within the economic family had worked a minimum of 1,008 hours spread over a minimum of 36 weeks during the year. This minimum was chosen to represent an average employment of $3 \%$ days of 8 hours in each of 36 weeks. Families in which the chief earner was employed in a distinctly seasonal industry such as clothing manufacturing and building were included, if the chief earner had had employment for 28 hours in each of 30 weeks. These minima, however, are not to be regarded as criteria representing adequate employment.
6. Definition of family.-The study was limited to private economic families of two or more persons sharing their incomes, living together, and sharing the same table, eating not less than 2 meals a day prepared at home for at least 11 months. In addition, families whose situation during the year just previous to the visit of the Bureau's investigator was difficult or impossible to analyze on a statistical basis were excluded from the survey. Specific reasons for such exclusion were as follows:
a. If the homemaker worked away from home both day and night for more than 78 days in the year.
b. Families boarding for more than 1 month.
c. Presence of more than the equivalent of two boarders and/or lodgers, i. e., more than 104 boarder and/or lodger weeks (not including related persons giving complete records of their incomes and expenditures).
d. Families having guests for more than the equivalent of 26 guest weeks. ${ }^{*}$
$\therefore$ e. Families having another family or two unrelated dependent persons over 21 years of age living with it and completely dependent on it (unless the dependents were parents of the homemaker, husband, or chief earner).

[^6]7. Families not on relief.-No families who received direct relief or work relief during the schedule year were included.
8. Family income-a. No family was included which had an annual family income less than $\$ 500$ during the schedule year.
b. No upper limit was placed upon family income as such, but no family was included which had received more than one-fourth of its income from interest, dividends, royalties, speculative gains, or rents (not including receipts from boarders and lodgers).
c. No family which had received income from an owned business equal to more than half of the chief earner's income from wages or salary was included.
d. No family having received gifts or income in kind of a value equal to a fourth of its total money income was included.
$e$. If a family had received rent in payment for services, it was ineligible for inclusion in the study.
$f$. If a family received 3 months or more free rent it was not included.
9. Residence.-Families must have resided in area of investigation for 9 months or more.

## Appendix E

## Nativity of the Homemakers in the Families Studied

There is a striking similarity between the national backgrounds of the white homemakers who supplied the data for the present report and those of the married white women of the entire city. Not quite half of them were born in the United States; Italy, Russia, Poland, and Germany rank next, each furnishing from 6 to 10 percent of the homemakers who cooperated in the investigation; Austria and Ireland follow, each contributing about 4 percent. The remaining homemakers came from scattered countries. ${ }^{1}$

Two-thirds of the homemakers in the Negro families studied were born in the United States; almost one-quarter (24) were borm in the British West Indies, while 5 came from the Virgin Islands and 3 from Puerto Rico. No figures are available to show the distribution by country of birth of all married Negro women in New York City, although census data for 1930 show 16.7 percent of the total Negro population of New York City as foreign born." Figures on the country of birth of all the Negroes in the United States show that 75.5 percent of the total foreign-born Negro population of the country was born in the West Indies.

Tably B.-Country of birth of married white women in New York City

| Country | Homemak- ers conper- ating in Buranu ot Labor Sta- tistiessindy $1094-35$ | Mar- ried woman 15 gears of age and over | - Comatry | Fomemakers cooparating in Burear of Labor Statisticsstudy 1934-38 | Mar rifad whemen 15 yests of age and OVE 1950 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Total | Percent 100.0 | $\begin{array}{r} \text { Percent } \\ 100.0 \end{array}$ | Funkry | Percens 2.1 | Preent 1.8 |
| Onited Etstan. | 68.2 | t7. 4 | England, Cootland, and | 1.8 | 28 |
| Italy. | 10.1 | 10.8 | Crechosloparia | 1.2 | 1.0 |
| Russia. | 9.4 | 11.3 |  | 1.2 | . 7 |
| Poland. | 6.1 | 6.1 | Sweden . .-................... | 1.1 | . 7 |
| Orimany | 8.0 | 4.8 | Cansda (not French).........- | . 8 | . 6 |
| Austria. | 4. 8 | 4.8 | Rumatia....... | .888 | 12 |

; U. 8. Burwau of the Census, Consus for 1080, vol, II. pp. 059, 1084.

[^7]
## Appendix $F$

Field Procedure

## Interview method of securing data.

The original data for this report came from families who estimated and calculated their various expenditures, with the help of special forms interpreted by trained field workers. The investigators were provided with a schedule which called for the entry of the data on income and outgo in considerable detail, partly because the details themselves are of value, and partly because it is easier for informants to remember the individual items of their family transactions than it is to provide the investigator with summary figures. This method was used rather than asking the families to keep records of disbursements at the time disbursements were made, because the procedure followed makes possible the inclusion of many families who would have been unwilling or unable to keep regular household accounts. For facsimile of schedule used, see figure B.

No schedule was accepted for summarization in the present study unless the figures on total money receipts and total money disbursements agreed at least within 5 percent of the larger figure. It is not to be hoped that all the figures in each schedule were accurate to that extent, but no reason to suppose any persistent bias inheres in the estimates has appeared in the course of the survey.

Figure B. Schedule Facsimile
. ェ. U. S. DEPARTMENT OF LAEOR, EUREAU' OF LAEOR STATISTICS, WASHINGTON
bate ................................................

FAMILY DISBURSEMENTS OF WAGE EARNERS AND SALARIED WORKERS




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| 7. Motel. |  |  |  |  |  |  |  |  |  |
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| 9. Davminparim |  |  |  |  | 37. Othe, oothou... |  |  |  |  |
| 10. Coxeben, daybeta |  |  |  |  | 38. Table rumern, druser scarla. |  |  |  |  |
| 11. Dremero. |  |  |  |  | 30. Ourtaiza, striperim. |  |  |  |  |
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| 12. Elideboarde, butiela. |  |  |  |  | 41. OTher (apaelij) |  |  |  |  |
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| 16. Tablan, exoept kitcheo. |  |  |  |  | 48. Glammar |  |  |  |  |
| 17. Chalru: Wooma |  |  |  |  | 4. Talinwart: 8ilver, |  |  |  |  |
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| 20. Tencerm, wheol tray. |  |  |  |  | ELECTRICAL RQUIPMENT |  |  |  |  |
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Family Compoutition

Check interviewing.-At the beginning of the field work one out of every five schedules submitted by each agent was checked by one of the supervisors in an interview with the family having originally provided the schedule data. The Washington office provided the field office with specific instructions concerning the methods of handling the check-interviews. The schedules to bs checked were chosen at random. The name of the agent making the first call was not known to the check-interviewer, thus eliminating any possible personal bias. In returning to the family for a check-interview the investigator provided the informant, usually the homemaker, with a brief summary of family expenditures and the balance of receipts and disbursements, checked it with her, and checked also the details of some section of the schedule, selected at random.

Later in the course of the field work when the check interviews disclosed that certain agents were having difficulty in obtaining accurate information, a larger proportion of their schedules were checked. When the check showed that the work of certain agents was very accurate, only 1 out of 10 schedules was verified by a return interview. As the work progressed, relief workers whose schedules had proven wholly reliable were advanced to the position of check-interviewers.
Food check lists for 1 week.
Previous experience in collecting statistics on the details of annual food expenditures has shown the difficulty of securing reliable estimates of the year's purcheses. The schedule for this investigation was, therefore, prepared with two sections dealing with food expenditures. The first was in effect a check list providing in detail for the entry of the quantities of foods purchased and used, and expenditures for foods in the week immediately preceding the interview. The second section was prepared to contain a summary of food expenditures during the year. The section for entry of foods during 1 week (which listed over 194 foods) served two purposes. It secured from each family detailed estimates of food purchases with $8 s$ high a degree of accuracy as is possible unless supervised records of purchases are obtained, and it served to remind the homemaker of her customary expenditures, thus making it easier to estimate the family's total outlay for food in the four quarters of the year covered by the schedule.

Weekly records of food consumption.
In order to obtain as much information as possible on seasonal differences in food purchases and food consumption, each family interviewed was asked in addition to keep a record of food purchases and food consumption for 1 week in at least two, and preferably four, different quarters. Nine hundred and twenty-five such weekly records were obtained. They are being used by this Bureau for a report on seasonal variations in food expenditures which will appear at a later date. After the taking-off of the necessary data they were turned over to the Bureau of Home Economics, United States Department of Agriculture, where they are being analyzed for dietary adequacy. Preliminary results of that analysis are included in "Nutritive Value of Diets of Families of Wage Earners and Clerical Workers in North Atlantic Cities, 1934-35" which appear in the Monthly Labor Review for July 1936. A more completé report appears as United States Department of Agriculture Circular 507, 1939, entitled "Diets of Families of Employed Wage Earners and Clerical Workers in Cities," by by Hazel K. Stiebeling and Esther F. Phipard.

## Appendix G

## Analytical Procedure

## Income classification.

Data on family composition, earnings and income, and group expenditures are summarized by income levels at $\$ 300$ intervels to provide a basis for comparison of the results from this investigation with earlier studies. The same data are also presented by income level for families of types comparable with those studied in the 1917-18 investigation.

## Classification by economic level.

The analysis of data on family expenditure is complicated by the fact that, although in general the family spends as a unit, the family as a unit is a thoroughly unsatisfactory statistical measure, because of its variation in size and age composition. A family of two adults with an income of $\$ 1,200$ is obviously on an economic plane considerable higher than a family of six adults with the same income. Statistical analyses of the expenditures of a sample of families chosen at random is further complicated by the fact that in most cities the size of the family among wage earners and clerical workers increases as the income increases, as larger family incomes are more apt to come from increases in the number of earners then from the higher wages of the husband of the family. The chart on page 22 shows the larger families at the higher income levels in the groups studied in New York City.

To meet these difficulties as well as to take into account the fact that consumer demand varies with age, sex, and occupation, the families were sorted according to economic level as measured by amount spent per total-expenditure unit. To ascertain the economic level of each family the first difficulty arose in the necessity of taking into account the variations in consumer demand within each family due to differences in family composition.

## Expenditure unit-food relatives.

The problem was met in the present investigation by computing separately for food, clothing, and for other items the customary expenditures of persons of different age, sex, and occupation. The scale used in computing the relative expenditure for individuals for food was based on data secured from the Bureau of Home Economics, showing quantities of food estimated as actually consumed by persons of different age, sex, and physical activity. These estimates were based partly on the energy requirements of persons of different age, sex, and occupation, and partly on data on the actual food consumption of
families of urban wage earners and clerical workers. (To have secured an adequate number of records of the actual food consumption of individuals for this purpose would have required an expenditure far beyond the resources of the bureaus concerned.) These quantities of food were multiplied by average retail food prices to find the ratio which expenditures for women and boys of various age groups bore to expenditures for full time employed men aged 20 and over. In deciding which retail food prices should be used for this purpose, a test was conducted for 12 cities where the study was in process in the winter of 1935. For each of these cities, the same quantitiss of food were multiplied by the respective retail food prices for the given city. It was found that, despite the use of varying prices from city to city, the relative expenditures for women and children bore approximately the same ratio to those for employed men in each city. It was therefore decided to use, for all 12 of these cities, a scale of consumer expenditure for food based on United States average prices in 1934. The same procedure was followed for all other cties with adjustment for changes in food prices as the investigation advanced. The food expenditure scales were recalculated on the basis of United States average prices in the year ending May 31, 1935, and on United States average prices in the calendar year 1935 and these food relatives were used for schedules in cities where the field work was completed later. Within a given city, where field work extended over a considerable period, each schedule was coded with the food relatives for the period most nearly corresponding to the schedule year.

> Table C.-Relative jood expenditures for persons of different age, ses, and occupation 1

| Age-sex-cocupation group | Calculated on the basls of - |  |  |
| :---: | :---: | :---: | :---: |
|  | Averase pricas, catender year 1834 | Aversge pricas, Fegr ending May 31. 1836 |  prices, calendar Fear 1085 |
| Male: |  |  |  |
| Boys under 2...... | 0.51 | 0. 48 | 0.48 |
| Boys 2 and under 4 | . 81 | . 59 | . 51 |
| Boys 4 and under 7 .---- | . 61 | . 68 | . 6 |
| Boys 7 and under $9 . .$. | . 78 | .77 | . 78 |
| Boys 9 and under 11-.... | .80 | .84 | -80 |
| Boys 11 and under 13.... | . 02 | . 91 | 100 |
|  | 1.01 | 1.00 <br> 1. 08 <br> 1 | 1.00 |
|  | 1.02 | 2.02 | 1.080 |
| Men, 20 and over, unemployed and part-tim | 1.00 | - ${ }^{\mathbf{2} .00}$ | +80 |
| Fenale: |  |  |  |
|  |  |  |  |
| Girls 3 and under 4 | . 51 | - 58 | . 6 |
| Gris 4 and under8 | . 81 | . 59 | . 68 |
| Giris 8 and nuder 11 . | . 78 | . 77 | . 76 |
| Girls 11 and undar 14. | . 80 | . 84 | . 84 |
| Girls 14 and mater 20. | . 0 | . 91 | - 0 |
| Women, 20 and ovar, modkrataly cetive. | . 82 | . 88 | -8) |
| Women, 20 and over; active....... | . 92 | . 98 | - ${ }^{\text {\% }}$ |

[^8]
## Expenditure unit-clothing relatives.

The data secured in the present investigation were used as the basis for computing the scales of expenditure for clothing of persons of different age, sex, and occupation. The average annual clothing expenditures of white men wage earners and clerical workers, 21 through 35 years old, in all the cities covered in the present study were $\$ 56.68$. This amount is regarded as unity (1.00) in arriving at standard scales of expenditure for persons of other ages, sex, or occupation. In the following table average clothing expenditures of each class of persons are expressed as percentages of the average clothing expenditures of this group of employed men. The same

Table D.-Relative dothing expenditures for persons of different sex, age, and oceupalion
[1.00=(\$56.68), expenditure of male wage earners and clerical worters aged 21 and under 38 ]

| Age | Mals |  |  |  | Female |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Under 5 and at schoot | At home | Clerical | Wrge barnes | Under 5 , and at school | At hame | Clericel | Wage cernas |
| Duder 9. | 0.19 |  |  |  | 0.10 |  |  |  |
| 2 and nader 6 | . 34 |  |  |  | . 38 |  |  |  |
| 8 and under 9. | . 4 |  |  |  | - 4 |  |  |  |
| $t$ and under 12 | -33 |  |  |  | . 56 |  |  |  |
| 12 and under 15. | - 68 |  |  |  | . 7 |  |  |  |
| 16 and under 18. | . 88 |  |  |  | 1.01 |  | 1.08 | 1.08 |
| 11 and under 21. | 1.01 | . 89 | 1. 14 | 1. 13 | 1. 28 | 1.05 | 1.60 | 1. 6 |
| 21 sid under 24 |  | .57 | 1. 14 | 1. 07 |  | 1.04 | 1.80 | 1. 60 |
| 21 and under 27. |  | . 48 | 1. 13 | 1.00 |  | 1.02 | 1.64 |  |
| $2{ }^{2}$ and under 30. |  | . 6 | 1. 10 |  | .-....... | 1.00 | 1. 82 | 1.36 |
| 30 and under 37. |  | . 44 | 1.04 | . 82 |  | , 88 | 1. 88 | 1. 28 |
| 8tend under 42 |  | . 48 | , 84 | + 8 |  | - 88 | 1. ${ }^{3}$ | 1.07 |
| 42 and under 48. |  | . 41 | . 87 | . 81 |  | . 78 | 1.35 | . 84 |
| 48 and under 54. |  | .39 .37 |  | . 78 |  | .888 |  | . 84 |
| 64 and under 60. |  | . 37 | + 76 | +60 |  | . 510 | 1.03 .78 | -76 |

Deta based on white families 组 42 olties combtand.
scale was used for both white and Negro schedules. As there were not a sufficient number of cases of Negroes, it was not possible to develop a separate Negro clothing relative scale.

Since it was necessary to begin the coding and the tabulation of the schedules before the field work was completed, the computations of unit clothing expenditure ${ }^{2}$ were at first made on the basis of preliminary scales computed from the clothing expenditure data in the schedules available at the time for the given city or group of cities within a region. After the field work had been terminated and the tabalation completed for all 42 cities, the scales given in the foregoing table were constructed on the basis of data for all these cities, all of which had populations over 50,000 .

It was desired that the scales should represent only those differences in clothing expenditure which are due to the three factors (age, sex,

[^9]and occupation) which were being measured in the computation of the scales. To compute the scales, after elimination of the influence of the other variables of family income and family size in the computations, the following steps were taken.
(1) Cards representing each person in all the families studied in cities with populations over 50,000 were sorted into cells such that all persons classified in a given cell were from families with the same income and of the same size, and the persons were of the same age, sex, and occupation.
(2) The average clothing expenditure for all the persons in each cell were then computed.
(3) These averages were then combined for each age-sex-occupation group. In making this combination, each age-sex-occupation group within each family-income family-size class was given the same weight. These weights were determined by the number of persons in each family-income family-size cell for all age-sex-occupation groups combined. The resulting averages for each age-sex-occupation group are the averages that would have been obtained if the distribution of persons by family income and family size had been the same in each age-sex-occupation group. The procedure followed in combining averages by the use of constant weights is similar to the procedure of a standard population frequently used by biologists in attempting to compare rates while eliminating differences caused by differing distributions by sex, age, marital status, etc. (cf. Raymond Pearl, Medical Biometry and Statistics, Philadelphia and London, 1930, ch. IX, "Standardized and corrected death rates," pp. 265-277).
(4) For each sex-occupation group there were now a series of average clothing expenditures for each age. These results were smoothed to eliminate minor irregularities.
(5) Absolute clothing expenditures at each age were converted to relatives by dividing the smoothed averages for each sex-occupation group for each age by the smoothed average expenditure for employed men aged 21 through 35.

The revised scales developed on this basis are still subject to the limitations of the nature of the population sampled, but they represent what seem to be the most definitive scales yet available showing effective demand for clothing among families of wage earners and clerical workers.

The revised scales were used to recode and reclassify the schedules for unit expenditure ${ }^{2}$ in order to test the magnitude of the differences

[^10]in final results which would have been obtained had the revised scales been used at the outset. The new distribution of families was not substantially different from the distribution for which the prelininary. clothing scales were used. Since clothing expenditures represent a fairly small proportion, ranging from one-ighth to one-tenth of family expenditures, it will be seen that even a fairly large revision in the clothing expenditure scales would yield only a slight change in total unit expenditure. The nature of the process will be clear from the sample code sheet, p. 235. Consequently, the distribution of families by economic level did not shift much with the introduction of revised relative clothing expenditure scales. Since, upon analysis, the changes were not found to be important, in all tables in the Tabular Summary and in the text, the distribution of families by economic level remains as it was established by the coding based, among other elements (see sample code sheet, p. 235) on the preliminary relative clothing expenditure scales.

The revised clothing scales did, however, produce a more pronounced change in the item "average number of clothing expenditure units per family," and correspondingly in the figure "unit clothing expenditure." ${ }^{8}$ The figure for "average number of clothing expenditure units per family," based on the revised scales is therefore used throughout in the Tabular Summary and in text tables 4, 5, 19, and 20. Correspondingly the figure "average number of expenditure units" " per family, whenever it appears in the Tabular Summary or in a text table, is based (among other elements including food and "other" expenditure) upon unit clothing expenditure computed from the revised relative clothing expenditure scales.

The item "average number of clothing expenditure units" or "average number of expenditure units" or both, occurs in tables 2,3, $5,6,19,20,22$, and 23 of the Tabular Summary.

The change in "average number of expenditure units" resulting from use of the revised scales was much smaller than the change in "everage number of clothing expenditure units" for the reason discussed in a preceding paragraph on the small change in the distribution of cases according to unit expenditure. Nevertheless the figure on the revised basis appears in the text and the Tabular Summary since it is consistent with the revised figure for clothing expendiutre units. The latter figure is published rather than the preliminary figure since it is believed, after extensive analysis and experimentation, that it represents a better approximation, based on more complete data and a more satisfactory summary technique, to a definitive answer to the

[^11]question: How does the clothing demand or customary clothing need of one family of given composition compare with that of another family of different composition? Lacking any absolute scale of clothing need, any such scale of clothing expenditure can, at best, only be an approximation. Nevertheless, the figures set forth on the basis of the revised scales are presented as the result of considerable study and experimentation as the most definitive yet available (granted the assumptions that age, sex, and occupetion do create real differences in the social situation of individuals, which in turn affect their need to make clothing expenditures as much or more to meet'social custom as for reasons of health). A further reason for presenting the revised clothing expenditure unit figures is that the figures stand as such independently of any other figures in the tables. That is, since the preliminary figures were used simply as a means to classification of cases and nowhere in the tabulations as an end product, the presentation of revised figures for this one item in no way disturbs the usefulness of the other items not affected by the revision.

## Expenditure unit-other items

Any attempt to compute customary expenditures on items other than food and clothing for persons of different age, sex, and occupation in the wage-earner and clerical groups would have required securing data on the expenditures for individuals in greater detail than seemed practical. It was, therefore, decided to compute expenditure per adult male equivalent for "other items" on the assumption that in actual practice with a given income a family divides the use of its goods, and its expenditures for all items other than food and clothing about equally among the members of the family.

## Total expenditure unit.

In finally computing the amount spent per total-expenditure unit for a given family, three measures of family size were calculated, one in terms of food-expenditure units (i. e., food relatives), another in terms of clothing-expenditure units (i. e., clothing relatives), and a third giving equivalent full-time members of the economic family (i. e., a relative of 1.00 for each member in the economic family for 52 weeks). In computing each of these measures for an individual the length of time the individual was dependent on the family funds was taken into account. This was done by multiplying the appropriate relative by the decimal equivalent of a year during which the person was dependent on family funds.

Expenditures by the given family for food were then divided by the number of food-expenditure units in the economic family, expenditures for clothing by the number of clothing-expenditure units in the economic family, and expenditures for other items, by the number of equivalent full-time persons in the economic family. The number
of dollars spent per total-expenditure unit was secured by adding together the three quotients, and this sum was used as a measure of the economic level of the family. The following figure $C$ shows the method of coding for a specific family:

Figure C.
Sample code theet


It should be noted that the computation of family size in terms of expenditure units is based on estimates of customary relative expenditures without regard to the adequacy of the goods consumed to meet physical or psychological needs. These units are not adapted for use in setting up or in revising ideal or normal budgets. That is, it is impossible to use these units in calculating the family budget needed if a child is to be added to the family without disturbing the level which the family budget was originally prepared to meet, nor may they be used to determine the subtraction possible if a budget computed for a family of given size is to be applied to a family with one less child, but without disturbing the standard which the budget was calculated to purchase. Such additions or subtractions can properly be made for the purpose indicated with these expenditure units only if the standard by which the budget was originally computed was in terms of these same units. Thus, if a budget for a family of given size has been calculated on the basis of a given number of expenditure units, using the relatives described in this study, along with some predetermined sum taken as meeting the needs of an adult man, the budget may be increased to care for the addition of a person to the family by use of this series of unite. But if the original budget for, let us say, a family
of two adults and two children was calculated on some other basis, the increase of the total budget by the decimal equivalent represented by an expenditure unit from this study corresponding to a child of specified age will not assure the continuance at the same standard of living of the family when the third child is added.

The measures used in calculating size of family in expenditure units in the present study are intended to represent customary behavior in families where the addition of a child is not as a rule accompanied by any addition to income, and the family must adapt its. expenditures to meet the additional burden. In arriving at the scales used to measure family size, no adjustments were included for possible differences in the economy of purchasing for larger as compared with smaller families.


[^0]:    Marca 1939.

[^1]:    ${ }^{1}$ Or parson for whon purchased.

[^2]:    ${ }^{1}$ Or person for whom purchased.
    T The evarage price paid for an article purchased should not be compated by dividing the "eaverage expenditure par person" by the "everage number of articles per person." Such a computation would leed to elight inecouracies in the second deolmal place, because of rounding both the dividend and diviser batore divislon.

[^3]:    In some establishments only those to be paid in the pay-roll period are listed to the administrative ofice or in the currant flas; in other establishments the sheate or the fles carry the aames of those employed at any time over a long period. The resulting arrars in sampling are not sarions, unless they are assoctated with level of wages or regulaity of employment and there seems to be no reason to assume that they are.
    ${ }^{2}$ This method of sampling has its obyious disadrantages: (I) It does not represent establahments with Iess than 10 amployees, but no list was avaliable for such establishments; (2) employees of amall establishments (but with more than 10 emplayees) overweighted in the sample in relation to these of large establishmonts. Such an overweighting seamed bettar than a method which would have reanlied in a large part of the sample of workers beling frawn from a few eatablishments having thousands of employeas. The time and fands ayailable for drawing employee names made it impessible to visit more than see employeas for this purpose. Under the circumstasces, if the method of propartional representation had been followad to Its logleal conclusion, in s city of 30,000 employars ( B number of thenn with over 2,500 employees), it wauld not have been unidely that one-quartor of the 1,00 sample amplogees would have bean drawa from one astablishment. The employess of a few large establiohments cannot be assumed to be representative of farge establishments not drawn in the employer's sample, because large establishments are far from being homogeneous in anything but size. They vary from large manulsciuring plants in the beavy industries to a factory bakery amploying a large proportion of womsn wage earners to ewtablishments with a majortiy of clerical workers.
    Ses pp. 201-294 for eliglbility requirements.

[^4]:    "A Seclo-Fconomic Grouping of the Gainfal Workers in the U. 日." Journal at Fmardean Statistionil Aseciation, yol, 28, pp. 377-357, Decembar 10 ss.

[^5]:    ${ }^{3}$ Works Progress Administration Oircular No. 2, "Oceapational Clasitiention and Code, July 1038'; Circular No, 2A, "Index of Oecnpations-Oceupational Olastification and Cods." September 1035.

[^6]:    Guests whre defned as parsons not antiroly dependent on the fanity funds who recelved boand and lodging trom the funily without money payment, but from whom it was impossibie to seoree date on fincoms and sxpenditurve.

[^7]:    iNo dita were obtained on the langth of time the forelgn-born among them had llved in the Unifed Btatss, but the tact that Immigration has been restrioted in ons way or another since 2914 makee it anilkely that many of them ware recent amivals from foroign countries.
    

[^8]:    i Besed on estmated actual diets of arban mage earnars and lowrersalaried clerical warizers prepared by the Bureau of Home Economics, U. S, Departmant of Agrictiture.

[^9]:    ${ }^{\text {a }}$ By unit clothlag exponditure is meant the annual amount spent for clotbing per elothint crpenditurs vilt.

[^10]:    EBy unit expenditure is mesit total amount of tamlly expenditaze per expanditure anit. The unit expendicura, which is used bs synonymous with "economio level" and with "famount spent per expanditure unit," is the sum of the following three Items: (1) Unit food expenditure, ar total family food axpenditure per food expenditure anit; (2) anit clothing expendlture, or total family chothing expondture per chething expenditure milt; and (3) per capita "othar" supenditure, or lotal family expenditure for ali items save food and elotbing: per parson in the exomomic famity for 52 rreeks.

[^11]:    ${ }^{3}$ This frure is not pabilished tn the Tebular Summary but the reader may compute it by dividiag the avarage total paroily clothing appanditure for any group by the arerage nomber of clothing expenditare units per family in that group. It is shown in taxt tabled 4, 5, 19, and 90; $\mathrm{pp} .25,28,75$, and 78 .
    The number of expenditure unite is derlved by dividiag totel thmily expenditure by total unit expendture. The computation of thistattor figury was explatiod in footwote 2, p. 283; alvosee serpple code sheet, p. 235 .

